



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,493	06/22/2006	Kentarou Kanae	292899US0PCT	6285
22850	7590	12/12/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			KRYLOVA, IRINA	
			ART UNIT	PAPER NUMBER
			4131	
			NOTIFICATION DATE	DELIVERY MODE
			12/12/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/584,493	Applicant(s) KANAE ET AL.	
	Examiner IRINA KRYLOVA	Art Unit 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/01/2008; 08/04/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 4131

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

The Abstract is objected as it consists of two paragraphs. Proper correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-5 of U.S. Patent No. 7,163,983.

Art Unit: 4131

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter. Claim 1 of the US 7,163,983 discloses random copolymer of ethylene, alpha-olefin and specific cyclic unsaturated monomer recited in claim 5 of the instant application. Claim 2 of US 7,163,983 discloses a blend of the random copolymer of claim 1 of US 7,163,983 (corresponding to claims 2-5 of the instant application) with a thermoplastic resin. Claims 4 and 5 of US 7,163,983 recite process for producing and a molded article produced from the thermoplastic elastomer composition, which correspond to claims 9 and 10 of the instant invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by **Kanae et al** in WO 03/002657.

Since US 6,670,426 is an English translation of WO 03/002657, it will be used for making citations in the rejection presented below.

Art Unit: 4131

Kanae et al discloses a thermoplastic elastomer comprising (as to instant claims 1-2, 6):

1) an olefin random copolymer formed by copolymerizing ethylene, alpha-olefin having 3-10 carbon atoms and an unsaturated monomer having a functional group, and optionally, a diene;

2) a thermoplastic resin comprising ethylene - maleic anhydride-grafted copolymers; ethylene-vinyl acetate copolymers; ethylene-acrylate; chlorinated polypropylene; ABS resins, AS resins, vinyl chloride resins, polyamide resins, polycarbonates; acrylic resins; methacrylic resins; vinylidene chloride (Abstract; col. 8, lines 60-67; col. 9, lines 1-11).

As to instant claim 3, the random copolymer is formed by copolymerizing ethylene, an alpha-olefin having 3-10 carbon atoms and an unsaturated monomer comprising a carboxyl, hydroxyl, epoxy, sulfonic groups (col. 2, lines 3-7). As to instant claim 5, the specific functional group comprises the structure, represented in claim 5 of the present application (col. 2, lines 8-27). As to instant claim 4, the random copolymer is formed by copolymerizing 35-94.99%mol of ethylene; 5-50%mol of alpha-olefin having 3-10 carbon atoms; 0.01-5 %mol of a functional cyclic compound and 0-10%mol of non-conjugated diene (col. 2, lines 60-64). As to instant claim 7, the thermoplastic resin is used in proportion 1-200 parts by weight per 100 parts by weight of functional group-containing copolymer (col. 9, lines 29-32).

As to instant claim 8, a softening agent can be added to the composition in proportion 0-100 parts by weight per 100 parts by weight of the functional-group containing copolymer (col. 10, lines 3-7). As to instant claim 9, the thermoplastic elastomer may be

Art Unit: 4131

produced by mixing the random copolymer, thermoplastic polymer, softening agent and subjecting the mixture to heat treatment (col. 10, lines 8-25; col. 11, lines 1-16). As to instant claim 10, the thermoplastic elastomers are used to make molded or formed products (col. 11, lines 50-65).

2. Claims 1, 6, 7, 9, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by **Grosse-Peppendahl et al** in US 5,132,182.

As to instant claims 1 and 6, **Grosse-Peppendahl et al** discloses a composition comprising a thermoplastic polyamide and a rubber containing carboxyl group (Abstract, col. 2, lines 57-67). The rubber comprises carboxylated ethylene-propylene-diene copolymer (col. 2, lines 67-69). The carboxylated ethylene-propylene-diene copolymer is produced by carboxylation of EPDM with unsaturated acids monomers or acid derivatives (col. 2, lines 57-63). As to instant claim 7, polyamide is used in amount of at least 30% by weight (Abstract). As to instant claim 9, the process for preparing composition comprising covulcanizing a thermoplastic polyamide and carboxylated rubber in the presence of peroxidic vulcanizing agent at a temperature between 140C-200C by injection molding or extrusion (Abstract, col. 2, lines 1-5; col. 3, lines 63-65). As to instant claim 10, the composition is used to make molded articles (col. 3, lines 57-61).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 4131

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Grosse-Peppendahl et al** in US 5,132,182, as applied to claims 1, 6, 7, 9, 10 above, and further in view of **Kanae et al** in WO 03/002657 (corresponding US 6,670,426).

Grosse-Peppendahl et al discloses a composition comprising a thermoplastic polyamide and a rubber containing carboxyl group (Abstract, col. 2, lines 57-67). The rubber comprises carboxylated ethylene-propylene-diene copolymer (col. 2, lines 67-69). The rubber copolymer comprises more than 25% of ethylene, more than 25% propylene, 1-10% diene (col. 3, lines 5-10).

Grosse-Peppendahl et al fails to teach the rubber component to be a random copolymer of ethylene-propylene-diene and the specific carboxylated unsaturated monomer recited in the instant claim 5.

Kanae et al discloses an olefin elastomer comprising random copolymer formed by copolymerizing ethylene, alpha-olefin having 3-10 carbon atoms, an unsaturated monomer having functional group, and optionally a diene (Abstract). As to instant claim 5, the functional unsaturated monomer comprises the structure of claim 5 of the instant invention (col. 2, lines 7-27). As to instant claim 4, the copolymer comprises 35-94.99%mol of ethylene, 5-50%mol of alpha-olefin having 3-10 carbon atoms; 0.01-

Art Unit: 4131

5%mol of functional cyclic comonomer, recited in claim 5 of the instant invention; and 0-10%mol of non-conjugated diene (col. 2, lines 45-55).

Since 1) **Grosse-Peppendahl et al** discloses a composition, process of making and molded articles produced from a combination of a polyamide thermoplastic resin and an ethylene-propylene copolymer having carboxylated functional groups;

2) **Kanae et al** discloses an elastomer of random ethylene-alpha olefin copolymer having a specific carboxylated functional group,

therefore, it would be obvious to one of ordinary skills in the art at the time of the invention has been made to include the ethylene-alpha olefin elastomer with specific cyclic carboxy group containing monomer of **Kanae et al** into a thermoplastic elastomer composition of **Grosse-Peppendahl et al** to ensure excellent elasticity, flexibility, mechanical properties, processability of the composition of **Grosse-Peppendahl et al** (see col. 1, lines 10-20 in **Kanae et al**).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loomis et al in US 4,613,533 discloses thermoplastic elastomeric composition comprising a blend of ethylene-alpha-olefin copolymer containing carboxylic acid groups or sulfur oxide; and ethylene-vinyl chloride.

Art Unit: 4131

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRINA KRYLOVA whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 4131

/I. K./
Examiner, Art Unit 4131